

TIANamp Virus DNA/RNA Fast Kit

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TIANamp Virus DNA/RNA Fast Kit

(Spin Column)

Cat. no. GDP315-F

Kit Contents

Product composition	GDP315-F (50 preps)
Buffer RLC	15 ml
Buffer PWT	50 ml
RNase-Free ddH ₂ O	15 ml
Proteinase K (10 mg/ml)	1 ml
RNase-Free Columns CR4 set	50 sets
RNase-Free Centrifuge Tubes (1.5 ml)	50 pcs

Storage

TIANamp Virus DNA/RNA Fast Kit can be stored at room temperature (15-30°C) for up to 15 months without showing any reduction in performance and quality. If any precipitate forms in the buffers, it should be dissolved by warming the buffers at 37°C for 10 min before use.

Introduction

This kit is developed for the isolation of viral DNA/RNA. Using specific adsorption and a unique buffer system, the kit can rapidly isolate viral DNA/RNA from 200 μ l whole blood, plasma, serum, urine, pleural and abdominal fluid, cerebrospinal fluid, saliva, lymphatic fluid, cell culture media supernatants, and cervical swabs, urethral swabs, pharyngeal swabs, nasal swabs, herpes fluid, sputum, and feces samples with high efficiency. The silica matrix material used in the centrifugal adsorption column of the kit can efficiently and specifically bind viral DNA/RNA. With the unique rinsing system, only a few simple steps are needed to obtain high-quality viral DNA/RNA, and at the same time, effectively remove impurities such as proteins and salt ions, etc. The nucleic acids obtained can be widely used in PCR, RT-PCR, qPCR, isothermal amplification, and sequencing library construction and other downstream experiments.

Features

Simple and fast The operation was simple and fast, and high quality viral DNA/RNA could be obtained in 15 minutes.

Sensitive and efficient Viral DNA/RNA can be obtained efficiently with a detection sensitivity as low as 75 copies/ml.

Attentions Please be sure to read this precaution before using the kit.

1. All centrifugation steps are carried out at room temperature (15- 30 °C).
2. Equilibrate the sample to room temperature before the experiment.
3. Before use, please add the corresponding volume of absolute ethanol according to the label on the bottle.

Protocol

Please add absolute ethanol to the buffer PWT before use, and refer to the label on the bottle for the volume to be added.

I. Sample pre-treatment

1. Samples include serum, plasma, urine, pleural and abdominal fluid, cerebrospinal fluid, saliva, lymphatic fluid, cell culture medium supernatant, etc.

Remove the samples, equilibrate them to room temperature, and proceed directly to step 2. If the animal saliva sample contains food residues, etc., centrifuge the sample at 12,000 rpm (13,400 × g) for 2 min to remove the supernatant and proceed directly to step 2 of the procedure.

2. Swab samples (cervical swab, urethral swab, pharyngeal swab, nasal swab, etc.)

- 1) Dry swab sample: add a particular volume (to submerge the swab) of saline, vortex and shake to mix well before proceeding to the next step.

- 2) Samples containing swabs and preservation solution: vortex shaking to mix the preservation solution and proceed to the next step.

3. Fecal samples

- 1) Samples without preservative: add 5 times the volume of saline, mix well with vortex shaking, and centrifuge at 12,000 rpm (13,400×g) for 2 min to remove the supernatant for the next step.

- 2) Samples containing preservation solution: mix by vortex, centrifuge at 12,000 rpm (13,400×g) for 2 min and remove the supernatant for the next step.

4. Tissue samples

Tissue blocks were homogenized by adding the appropriate amount of PBS buffer or saline, centrifuged at 12,000 rpm (13,400×g) for 2 min, and the supernatant was taken for the next step.

5. Sputum, alveolar lavage fluid

If the sputum is sticky, add 30 μl Buffer ST (provided by the customer) in advance for liquefaction, and then take 300 μl sample for the next step of the experiment.

6. Environmental swabs

Using a sterile cotton swab moistened with sterile saline, evenly rub the swab back and forth horizontally and vertically five times each over a 10 cm × 10 cm area in the most likely contact area (e.g., tabletops,

doorknobs, coveralls, etc.), and rotate the swab accordingly to cut off the area touched by the hand, and then drop the swab into 10 ml of sterile saline or a commercially available sampling tube. Vortex and mix before extraction and take 300 μ l sample for the next step.

7. Environmental samples such as waste water

The waste water sample was centrifuged at 12,000 rpm (13,400 \times g) for 2 min and the supernatant was taken for the next step. If the sample contains a lot of impurities such as feces, the sample can be diluted with 1-5 times of PBS buffer saline before extraction.

II. Extraction and purification step:

(I). Rapid procedure (for swabs, cell-free fluids, tissue suspensions, etc.)

1. Add 20 μ l Proteinase K and 200 μ l sample (samples should be equilibrated to room temperature) to the centrifuge tube and mix well. Add 250 μ l buffer RLC and 250 μ l isopropanol, mix well with vortex and shaking, and incubate at 56°C for 5 min. After cooling to room temperature, continue the experiment according to step (II) 2.

(II). Standard procedure (for complex samples such as sputum, feces, serum, plasma and whole blood)

1. Add 200 μ l sample (equilibrated to room temperature), 20 μ l Proteinase K and 250 μ l buffer RLC to the centrifuge tube, vortex and mix well. Incubate at 56°C for 5 min, cool to room temperature, add 250 μ l isopropanol and vortex and mix well.
2. Transfer all the above solutions to the RNase-Free adsorption column CR4 (column placed in the collection tube), cap the tube, centrifuge at 12,000 rpm (\sim 13,400 \times g) for 1 min, discard the waste solution, and put the column back into the collection tube.
3. Carefully open the cap of the column, add 600 μ l rinse solution PWT (**please check that absolute ethanol has been added before use**), cap the tube, centrifuge for 1 min at 12 000 rpm (\sim 13,400 \times g), discard the waste liquid and put the column back into the collection tube.
4. Repeat step 3.
5. Put the column back into the collection tube and centrifuge at 12,000 rpm (\sim 13,400 \times g) for 2 min, discard the waste liquid.
6. Place the column in an RNase-Free centrifuge tube (1.5 ml), carefully uncap the column and leave it at room temperature for 1 min. 50-150 μ l RNase-

Free ddH₂O was added dropwise to the middle part of the adsorbed membrane, covered, and left at room temperature for 2 min before centrifugation at 12,000 rpm (~13,400×g) for 1 min.

Note: Ensure the eluate (RNase-Free ddH₂O) is equilibrated at room temperature before use. If the volume of eluent added is less than 50 μl, to elute DNA/RNA from the membrane sufficiently, eluent should be carefully taken to the center of the membrane. The elution volume can be flexibly handled according to the subsequent experimental requirements.